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<p>(21) International Application Number: PCT/US97/23927 (22) International Filing Date: 19 December 1997 (19.12.97) (30) Priority Data: 60/034,509 27 December 1996 (27.12.96) US (71) Applicant (for all designated States except US): ICN, PHARMACEUTICALS, INC. [US/US]; 3300 Hyland Avenue, Costa Mesa, CA 92626 (US). (71)(72) Applicant and Inventor: TAM, Robert [GB/US]; 64 Delventura Road, Irvine, CA 92606 (US). (74) Agent: FISH, Robert, D.; Crockett & Fish, Suite 706, 1440 North Harbor Boulevard, Fullerton, CA 92835 (US).</p>		<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i> <i>With amended claims.</i></p>
<p>(54) Title: G-RICH OLIGO APTAMERS AND METHODS OF MODULATING AN IMMUNE RESPONSE</p> <p>(57) Abstract</p> <p>Aptamer oligonucleotides specifically bind to the DNA binding site of proteins such as Sp1 and Sp1-related proteins which regulate the genes which encode costimulatory molecules such as CD28 and cytokines such as IL-2 and GM-CSF. The oligonucleotides compete with the DNA-binding sites of regulatory proteins which specifically regulate molecules to modulate T-cell activation. This serves to modulate gene expression by preventing transcription of the gene. Aptamers are administered to provide therapies for diseases which involve aberrant T-cell activation such as psoriasis, Type I (insulin-dependent) diabetes mellitus, multiple sclerosis, autoimmune uveitis, rheumatoid arthritis, systemic lupus erythematosus, inflammatory bowel disease (Crohn's and ulcerative colitis), and septic shock and to regulate normal T-cell activation such as in allograft rejection.</p>		

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